

# San Juan Islands Watershed, WRIA 2

This focus sheet provides information on the availability of water for new uses in the San Juan Islands Watershed. This information provides a starting point for potential water users in determining the best strategies for securing water for a future project or proposal in this area.

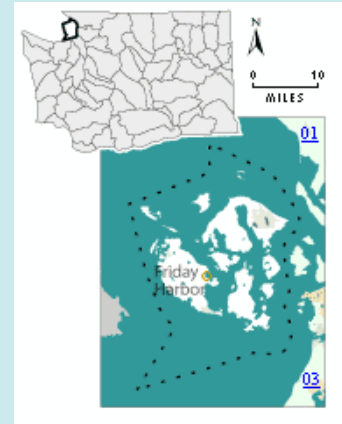
The San Juan Islands Watershed, also known as Water Resource Inventory Area 2 (WRIA 2) consists of an archipelago of five major and over 100 smaller islands situated in the northern part of Puget Sound between Skagit county and Vancouver Island. The islands are a prime spot for tourism and vacation homes so during the summer months the island's population increases by as much as 40%. There are no major rivers in the watershed, and much of the water available for economic use comes from groundwater which is recharged exclusively from precipitation. These islands are partially situated in the rain shadow of the Olympic Mountains and therefore receive a broad range of rainfall, from less than 26 inches in the southeastern part of Lopez Island and San Juan Island to over 48 inches in the northeast part of Orcas Island.

Most of this precipitation arrives during the winter months when water demands are the lowest, and only a fraction becomes available for human and economic uses. Little of the San Juan Islands watershed benefits from snow pack so during the summer when there is little rain naturally, low stream flows are dependent on groundwater inflow. This means that groundwater and surface water are least available when water demands are the highest.

Much of the water in Water Resource Inventory Area (WRIA) 2 is already legally spoken for. Increasing demands for water from ongoing population growth, declining streamflow levels, and the impacts of climate change have put Washington's water supplies at risk. The San Juan islands are increasingly lacking water when and where it is needed, particularly during the summer months.

## Factors affecting water availability

Surface water is very limited in the San Juan Islands. Cascade Creek on Orcas Island is the largest surface stream. A few other small perennial or ephemeral creeks flow on the major islands. Groundwater is an important source of fresh water in the San Juans. A significant part of the islands consists of underlying bedrock which limits the amount and accessibility



## Definitions

**Aquifer:** A rock formation that is capable of storing and transmitting groundwater.

**Permit-exempt well:** The state Ground Water Code allows for certain uses of small quantities of groundwater without obtaining a permit from Ecology. (RCW 99.44.050)

**Mitigation plan:** A scientifically-sound plan intended to avoid impairment to existing water rights or capturing water from a closed source.

**Seawater intrusion:** The movement of salt water into freshwater aquifers.

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of groundwater. The likelihood of obtaining large amounts of groundwater for new uses in areas with underlying bedrock is low.

### **Seawater intrusion**

In certain coastal areas, seawater has intruded into some island aquifers. This is especially true on Lopez Island. The Department of Ecology (Ecology) cannot issue a new water right if subsequent pumping of wells will cause contamination of fresh groundwater by saltwater unless the effect of seawater intrusion is mitigated. High salt content renders groundwater useless for most beneficial purposes.

### **Closures**

Ecology has closed some surface water sources to new appropriations based on recommendations by the Department of Fish and Wildlife. This includes Lake Killebrew and Sportsman Lake.

In addition, Egg Lake is essentially seasonally closed. The lake level cannot drop more than six inches below the summer average.

### **Water currently available for new uses**

New uses are encouraged to connect to an existing water system if available. This is the simplest and fastest option for securing a water supply.

With the exceptions listed above, both surface and groundwater are available for appropriation in the San Juan Islands. The groundwater permit exemption allows certain users of small quantities of groundwater (most commonly, single residential well owners) to construct wells and develop their water supplies without obtaining a water right permit from Ecology. Such a use is only exempt from the requirement to first obtain a water right permit. These water uses are subject to all other provisions of the water code including the seniority system and can be regulated to protect existing water rights. For more information about the groundwater permit exemption, refer to [www.ecy.wa.gov/pubs/fwr92104.pdf](http://www.ecy.wa.gov/pubs/fwr92104.pdf).

### **Additional options for processing water right applications**

If you cannot hook up to an existing system, or more water is needed than can be obtained from a permit-exempt well, options for securing water for a new use include:

- Processing an application through the Cost Reimbursement Program. [www.ecy.wa.gov/pubs/0511016.pdf](http://www.ecy.wa.gov/pubs/0511016.pdf).
- Because many valuable homes are built right on or near the shoreline of the islands where fresh groundwater is not available, there are increasing numbers small desalination systems supplying individual homes or small multiple domestic water systems.
- Some homes are being at least partially supplied by rooftop rainwater capture systems. The feasibility of this option is limited in those areas that receive the least rainfall.

For more information on these and other options, refer to “Alternatives for Water Right Application Processing” [www.ecy.wa.gov/pubs/1111067.pdf](http://www.ecy.wa.gov/pubs/1111067.pdf).

## **Pending water right applications in this watershed**

Washington water law is based on the “prior appropriation” system, often called “first in time, first in right.” Applications for water from the same source must be processed in the order they are received. (There are certain exceptions, see “Additional options for processing water right applications” above.)

Ecology asks anyone who needs a water right (new, change, or transfer) to submit the pre-application consultation form and meet with us to review your water supply needs and project proposal.

- Apply for a New Water Right  
<http://www.ecy.wa.gov/programs/wr/rights/newrights.html>
- Apply to Change or Transfer a Water Right or Claim  
[http://www.ecy.wa.gov/programs/wr/rights/change\\_transfer\\_use.html](http://www.ecy.wa.gov/programs/wr/rights/change_transfer_use.html)

The map in this document shows some of the factors that will be considered when evaluating water right permit applications. Here are some information sources to assist you with your research:

- Locate and research water rights on land parcels anywhere in the state (Water Resource Explorer)  
<http://www.ecy.wa.gov/programs/wr/info/webmap.html>
- Pending Water Right Applications by County  
<http://www.ecy.wa.gov/programs/wr/rights/tracking-apps.html>
- Subscribe to a water right application RSS feed for a county or WRIA  
[http://www.ecy.wa.gov/programs/wr/rights/wr\\_app\\_rss.html](http://www.ecy.wa.gov/programs/wr/rights/wr_app_rss.html)
- WRIA map showing the total number of water right claims, certificates, permits and applications  
<http://www.ecy.wa.gov/programs/wr/rights/Images/pdf/waterright-wria-maps.pdf>
- Search and view well reports using a variety of search tools  
<https://fortress.wa.gov/ecy/waterresources/map/WCLSSWebMap/default.aspx>

## **For more information**

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